



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,958	12/20/2000	Michael Neal	DEM1P001	7264

36088 7590 05/24/2005

KANG LIM
3494 CAMINO TASSAJARA ROAD #436
DANVILLE, CA 94306

EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT PAPER NUMBER

3639

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/741,958	Applicant(s) NEAL ET AL.	
	Examiner Akiba K Robinson-Boyce	Art Unit 3639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

AD

DETAILED ACTION

Status of Claims

1. Due to communications filed 3/17/05, the following is a non-final office action. Claims 1, 2, 4 and 6 have been amended. Claims 1-13 are pending in this application and have been examined on the merits. The previous rejection has been withdrawn, and the following reflects the claims as amended. Claims 1-13 are rejected as follows.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/17/05 has been entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouimet et al (US 6,094,641), and further in view of Ouimet et al (US 6,078,893).

As per claim 1, Ouimet '641 discloses:

an econometric engine for modeling sales as a function of price to create a sales model, (Col. 4, lines 35-44, [demand model gives predicted sales of an item based on price]);

a financial model engine for modeling costs to create a cost model, (col. 4, lines 52-53, [pricing model]), which includes an activity-based costing module, Col. 2, lines 1-12, including visibility, and taking the promotional cost into account when modifying the demand model, in this case, the module is inherent with Ouimet since Ouimet's system is computer-implemented and in order to create models, a module is necessary in a computerized system); and

an optimization engine coupled to the econometric engine and financial model engine to receive input from the econometric engine and financial model engine, wherein the optimization engine generates the preferred set of prices, (Col. 5, lines 45-48, [using fitted, modified demand model to determine price that will maximize profits, {optimization}])).

Ouimet '641 fails to disclose a configuration to receive variable costs and fixed costs, but does disclose a pricing module in col. 4, lines 52-53.

However, Ouimet '893 discloses:

configured to receive variable costs and fixed costs, (col. 6, lines 42-61, shows that when a user selects a market model, it can be one with no price change or one that does not contain adjustable market model parameters, also shows the model using adjustable parameters, in this case, the parameters are directly proportional to the

variables, therefore, if the parameters are adjusted, so are the variables such as price). Ouimet '893 discloses this limitation in an analogous art for the purpose of showing that market models can be represented by using values that change/are adjustable, and also do not need to contain adjustable values.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to receive variable costs and fixed costs with the motivation of creating both a fixed or variable market model.

As per claim 4, Ouimet '641 discloses:

creating a sales model, (Col. 4, lines 35-44, [demand model gives predicted sales of an item based on price]);

creating a cost model, (col. 4, lines 52-53, [pricing model], which includes activity-based costing, Col. 2, lines 1-12, including visibility, and taking the promotional cost into account when modifying the demand model); and

generating the preferred set of prices for the plurality of products based on the sales model and cost model, (Col. 5, lines 45-48, [using fitted, modified demand model to determine price that will maximize profits, {optimization}])).

Ouimet '641 fails to disclose the activity-based costing including fixed costs and variable costs, but does disclose a pricing module in col. 4, lines 52-53.

However, Ouimet '893 discloses:

the activity-based costing including fixed costs and variable costs, (col. 6, lines 42-61, shows that when a user selects a market model, it can be one with no price change or one that does not contain adjustable market model parameters, also shows

Art Unit: 3639

the model using adjustable parameters, in this case, the parameters are directly proportional to the variables, therefore, if the parameters are adjusted, so are the variables such as price). Ouimet '893 discloses this limitation in an analogous art for the purpose of showing that market models can be represented by using values that change/are adjustable, and also do not need to contain adjustable values.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to receive variable costs and fixed costs with the motivation of creating both a fixed or variable market model.

As per claim 5, Ouimet '641 discloses:

creating a sales model... (Col. 4, lines 35-44, [demand model gives predicted sales of an item based on price])

Ouimet '641 fails to disclose creating a plurality of demand groups, wherein each demand group is a set of at least one product and wherein at least one of the demand groups is a set of at least two products, but does disclose utilizing demand models to predict prices in the abstract, lines 1-5.

However, Ouimet '893 discloses creating a plurality of demand groups, wherein each demand group is a set of at least one product and wherein at least one of the demand groups is a set of at least two products, (col. 8, lines 29-35, [selecting demand model by breaking up a retailer's market into smaller groups]). Ouimet '893 discloses this limitation in an analogous art for the purpose of showing that groups are used to determine demand.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to create a plurality of demand groups with the motivation of optimizing models according to categories.

Ouimet '641 fails to disclose creating a market share model for each product in each demand group, but does disclose the utilization of a demand model to optimize prices.

However, Ouimet '893 discloses:

creating a market share model for each product in each demand group, (col. 8, lines 35-37, [maximize market share by using demand model]). Ouimet '893 discloses this limitation in an analogous art for the purpose of showing that market share can be modeled and maximized by using the demand model.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to create a market share model for each product in each demand group with the motivation of determining market shares according to categories.

5. Claims 2, 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouimet et al (US 6,094,641) as applied to claim 1 above, and further in view of Ouimet et al (US 6,078,893), and further in view of Ouimet et al (US 6,308,162).

As per claim 2, Ouimet '641 discloses:

a price calculator connected to...the financial model engine, and the econometric engine, wherein the price calculator determines the preferred set of prices based on rule parameters, the sales model, and the cost model, (Col. 8, lines 18-20, [shows

Art Unit: 3639

calculating], col. 5, lines 50-55 and 60-65, [see equations listed where calculating is done via the equations])

neither Ouimet '641 nor Ouimet '893 disclose a business rule tool, which stores a plurality of rule parameters, but Ouimet '641 does disclose a routine in col. 6, lines 6-8, where rules must be present in order to successfully process the routine.

However, Ouimet '162 discloses the following:

a business rule tool, which stores a plurality of rule parameters, (col. 1, lines 30-34, [rule based approach]). Ouimet '162 discloses this limitation in an analogous art for the purpose of showing that rules are used in an approach to optimize models.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize a rule tool with the motivation of going through the process of optimizing models to determine prices in a logical manner.

As per claim 3, Ouimet '641 discloses:

further comprising a support tool connected to the optimization engine wherein the support tool receives the preferred set of prices from the optimization engine and provides a user interface to a client, wherein the user interface provides the preferred set of prices to the client, (col. 6, lines 17-26, [provided with list], w/ Fig. 1, {102}, [display]).

6. Claims 6, 7, 8, 10, 11, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouimet et al (US 6,094,641) and further in view of Hartman et al (6,725,208).

As per claim 6, Ouimet et al '641 discloses:

an econometric engine for modeling sales as a function of price to create a sales model, (Col. 4, lines 35-44, [demand model gives predicted sales of an item based on price]);

a financial model engine for modeling costs to create a cost model, (col. 4, lines 52-53, [pricing model], which includes an activity-based costing module, Col. 2, lines 1-12, including visibility, and taking the promotional cost into account when modifying the demand model, in this case, the module is inherent with Ouimet since Ouimet's system is computer-implemented and in order to create models, a module is necessary in a computerized system); and

an optimization engine coupled to the econometric engine and financial model engine to receive input from the econometric engine and financial model engine, wherein the optimization engine generates the preferred set of prices, (Col. 5, lines 45-48, [using fitted, modified demand model to determine price that will maximize profits, {optimization}]).

Ouimet et al '641 fails to disclose based on Bayesian modeling, but does disclose utilizing demand models to optimize prices in the abstract, lines 1-5.

However, Hartman et al discloses:

Based on Bayesian modeling, (Abstract, lines 1-4, shows Bayesian modeling used for optimization]). Hartman et al discloses this limitation in an analogous art for the purpose of show in that Bayesian modeling can be used to determine optimal prices.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize Bayesian modeling with the motivation of processing a particular optimization technique to determine prices.

As per claims 7 and 8, Ouimet et al '641 fails to disclose wherein the Bayesian model is a Bayesian Shrinkage model or where the Bayesian Shrinkage model is a multi-stage model, but does disclose utilizing demand models to optimize prices in the abstract, lines 1-5.

Official notice is taken that it is old and well known in the art for Bayesian models to be Bayesian Shrinkage models and for the Bayesian Shrinkage models to be multi-stage models. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the Bayesian models to be Bayesian Shrinkage models and for the Bayesian Shrinkage models to be multi-stage models with the motivation of using these types of models to effectively come up with optimization results through a step-by-step process.

As per claim 10, Ouimet et al '641 discloses:

wherein the market conditions include a price point, (col. 7, lines 44-48, [price point]).

As per claim 11, Ouimet et al '641 fails to disclose wherein the econometric engine divides the plurality of products into a plurality of demand groups, where at least one of said demand groups has at least two of said products in said at least one demand group, but does disclose utilizing demand models to predict prices in the abstract, lines 1-5.

However, Ouimet '893 discloses divides the plurality of products into a plurality of demand groups, where at least one of said demand groups has at least two of said products in said at least one demand group, (col. 8, lines 29-35, [selecting demand model by breaking up a retailer's market into smaller groups]). Ouimet '893 discloses this limitation in an analogous art for the purpose of showing that groups are used to determine demand.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to divide the plurality of products into a plurality of demand groups, where at least one of said demand groups has at least two of said products in said at least one demand group with the motivation of optimizing models according to categories.

As per claim 12, Ouimet et al '641 fails to disclose wherein the econometric engine generates a market share model for said products in said demand groups, but does disclose the utilization of a demand model to optimize prices.

However, Ouimet '893 discloses:

wherein the econometric engine generates a market share model for said products in said demand group, (col. 8, lines 35-37, [maximize market share by using demand model]). Ouimet '893 discloses this limitation in an analogous art for the purpose of showing that market share can be modeled and maximized by using the demand model.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to generate a market share model for said products in said

Art Unit: 3639

demand group with the motivation of determining market shares according to categories.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouimet et al (US 6,094,641) and further in view of Hartman et al (6,725,208), and further in view of Ouimet et al (US 6,078,893).

As per claim 9, neither Ouimet et al '641 nor Hartman et al disclose wherein the econometric engine provides demand coefficients to the optimization engine, the demand coefficients used for estimating demand given market conditions, but Ouimet et al '641 does disclose using demand models to create optimized outputs in the abstract, lines 1-17.

However, Ouimet et al '893 discloses:

wherein the econometric engine provides demand coefficients to the optimization engine, the demand coefficients used for estimating demand given market conditions, (Col. 13, lines 49-55, [item-specific coefficients]). Ouimet et al '893 discloses this limitation in an analogous art for the purpose of showing that coefficients for specific items can be used to optimized prices.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide demand coefficients to the optimization engine, the demand coefficients used for estimating demand given market conditions with the motivation of utilizing coefficients to convert optimized figures according to certain conditions.

Art Unit: 3639

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouimet et al (US 6,094,641) as applied to claim 6 above, and further in view of Hartman et al (6,725,208), and further in view of Ouimet et al (6,308,162).

As per claim 13, neither Ouimet et al '641 nor Hartman et al disclose As per claim 13, Ouimet et al '641 fails to disclose wherein the econometric engine determines a sales model for each demand group so that the optimization engine is able to calculate demand for said products by multiplying the market share model for said products with the sales model for the demand group to which the product belongs, but does disclose determining an optimized model in the abstract, lines 16-17.

However, Ouimet et al '162 discloses:

As per claim 13, Ouimet et al '641 fails to disclose wherein the econometric engine determines a sales model for each demand group so that the optimization engine is able to calculate demand for said products by multiplying the market share model for said products with the sales model for the demand group to which the product belongs, (col. 2, lines 15-17, [shown that the primary objective function is combined with the constraint function and multiplied by a weighing factor, resulting in an optimized objective function, w/ Col. 4, lines 2-14, [shows that market share is the primary objective function and is multiplied by a factor to get maximized gross profits, in this case, this calculation is analogous to multiplying in the claim limitation since they both yield an optimized result]). Ouimet et al '162 discloses this limitation in an analogous art for the purpose of using a multiplication factor to yield optimized results.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to determine a sales model for each demand group so that the optimization engine is able to calculate demand for said products by multiplying the market share model for said products with the sales model for the demand group to which the product belongs with the motivation of determining an optimized solution.

Response to Arguments

9. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 571-272-6734. The examiner can normally be reached on Monday-Tuesday 8:30am-5pm, and Wednesday, 8:30 am-12:30 pm.

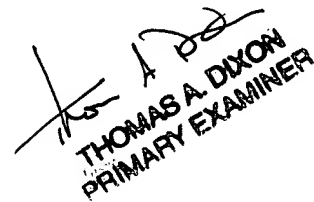
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 571-272-6812. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Art Unit: 3639

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



A. R. B.
May 17, 2005



THOMAS A. DIXON
PRIMARY EXAMINER